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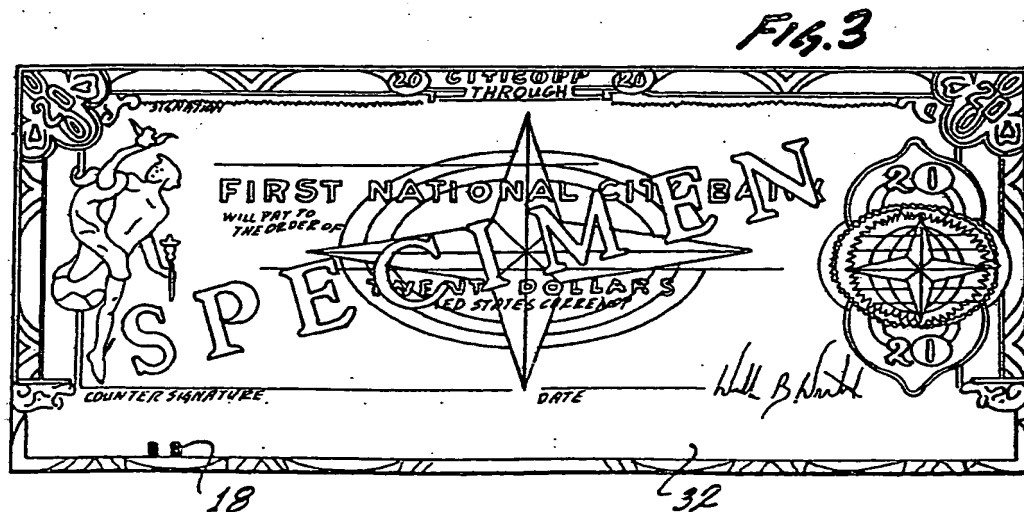
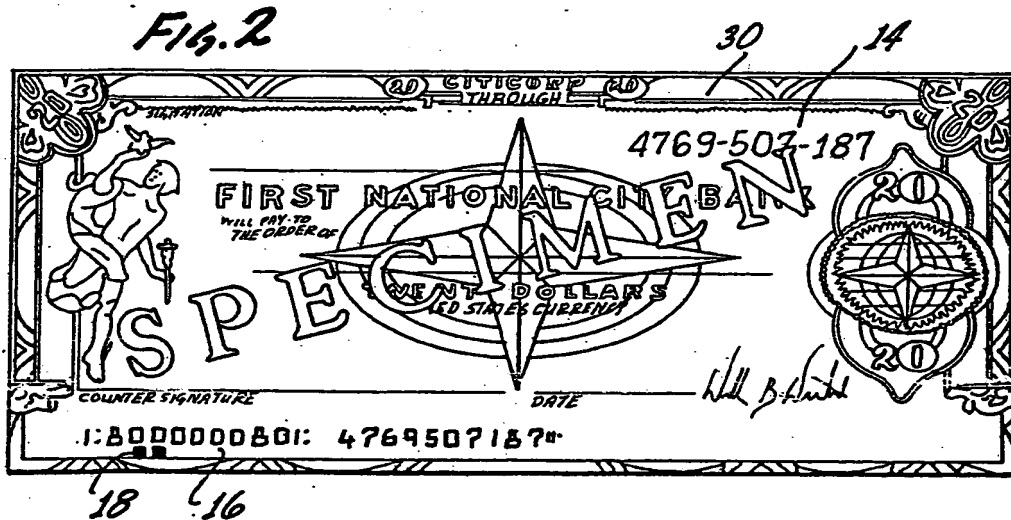
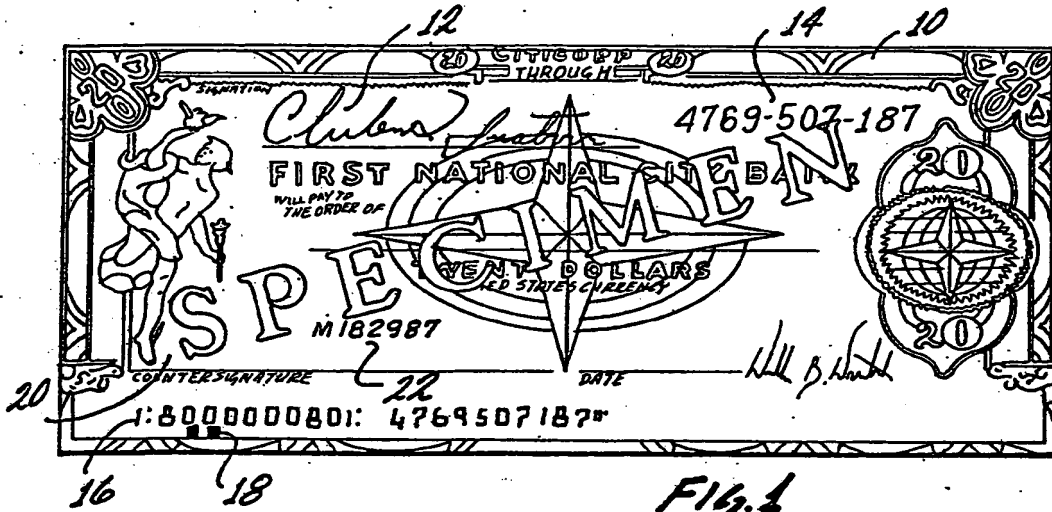
**(54) Apparatus and method for  
personalizing checks**

(57) An apparatus for providing a personalization of a blank check form with particular customer information and with the personalization for use as identification when the personalized check is presented for cashing, including means for storing information representative of a replica of a particular customer's signature, means for storing a plurality of blank check forms for use or personalization

with the particular customer's signature, a printing station for printing information on the blank check forms, means coupled to the means for storing the blank check forms and to the printing station for transporting individual ones of the stored blank checks to the printing station, and means coupled to the printing station and responsive to the stored information for controlling the printing at the printing station of the replica of the particular customer's signature on individual ones of the blank check forms.

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FIG. 4

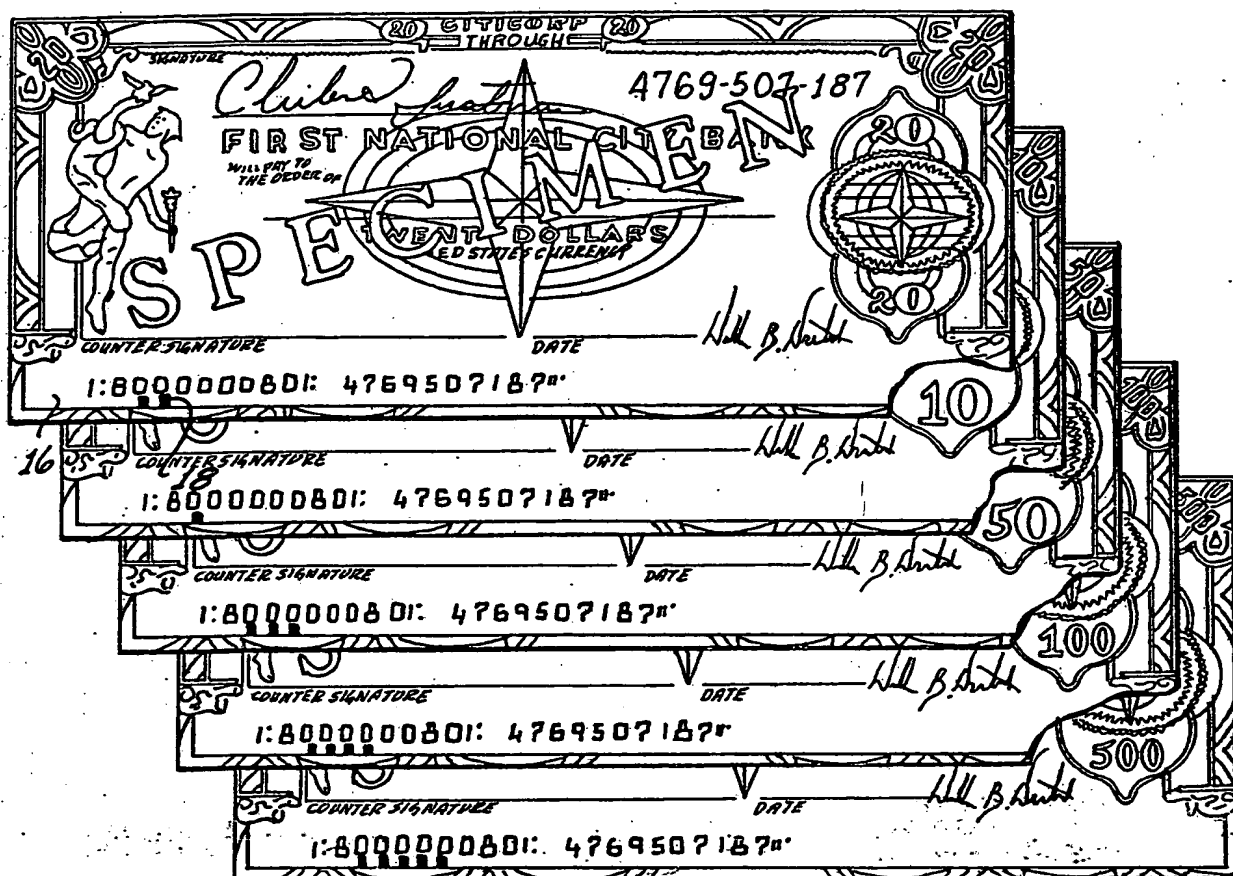
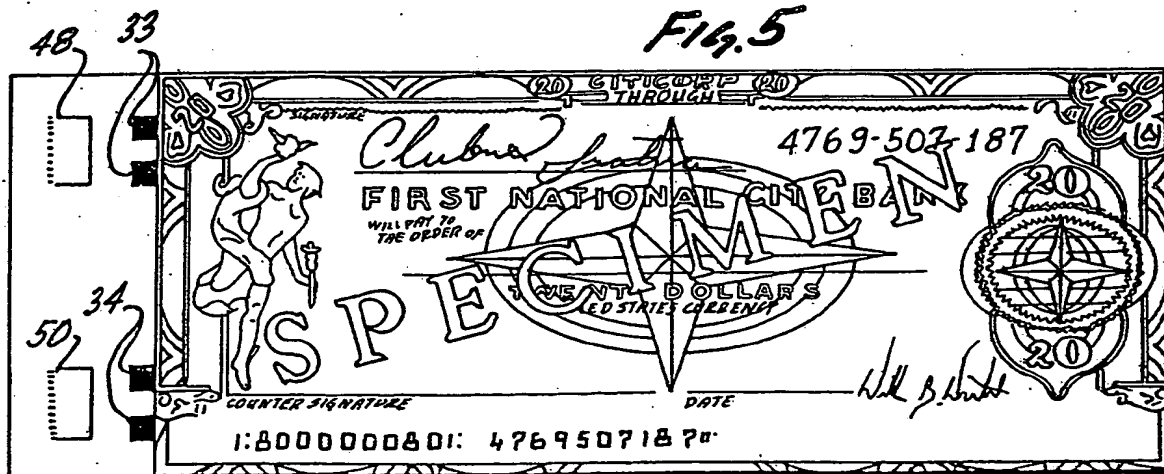


FIG. 5



**Fig. 6**

48
40
42

*Charles J. Joston*

**TRAVELERS CHECK CUSTOMER ADVICE**  
**FROM CITICORP SERVICES, INCORPORATED**

TO:

THIS IS PACK #  OF  PACKETS

QTY	AMT	CHECK NUMBER	FROM	TOTAL

DATE OF TRANSACTION

YOUR ACCOUNT HAS BEEN DEBITED TO THIS AMT.

TOTAL

TOTAL FEE

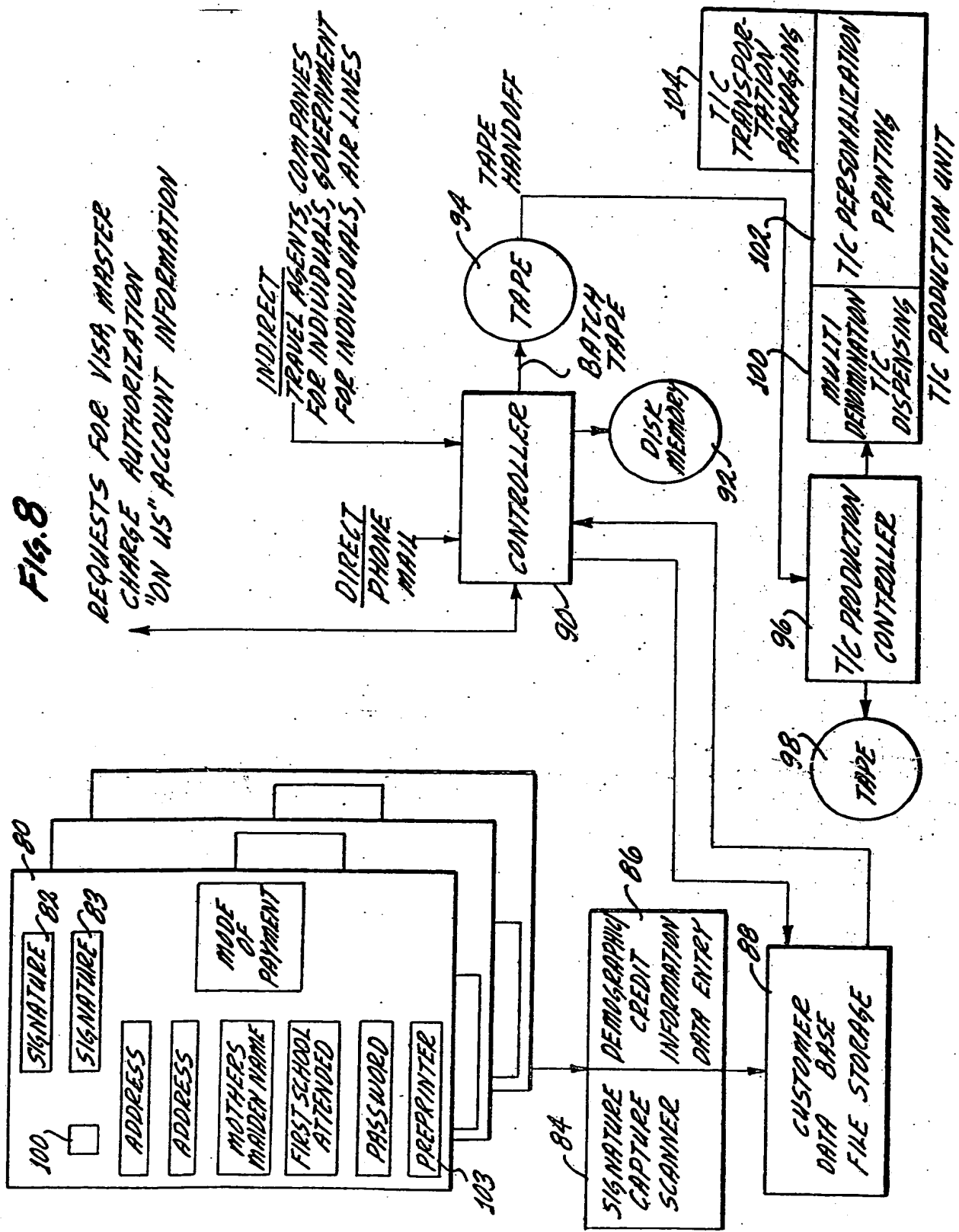
50
44
46

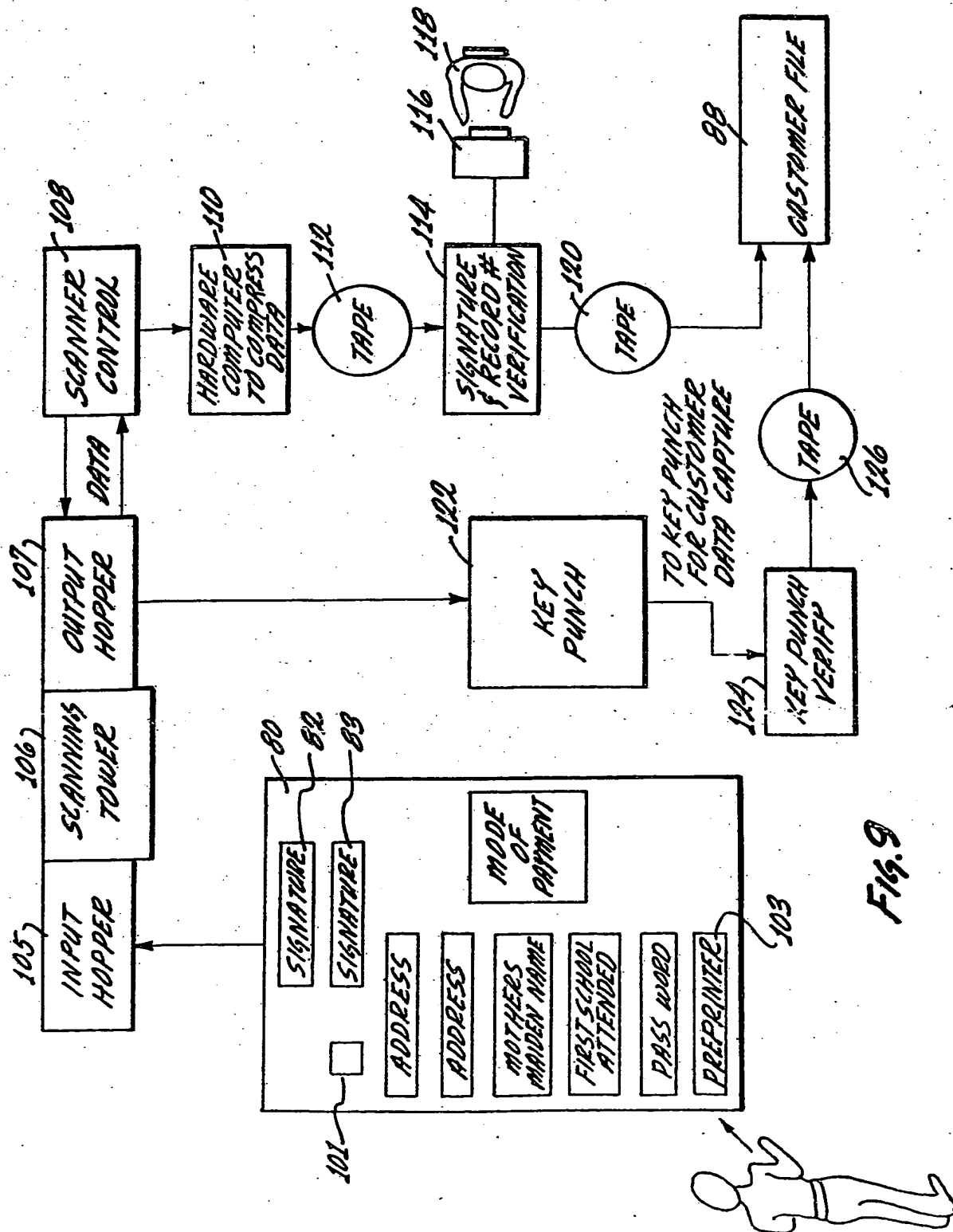
**Fig. 7**

48
60

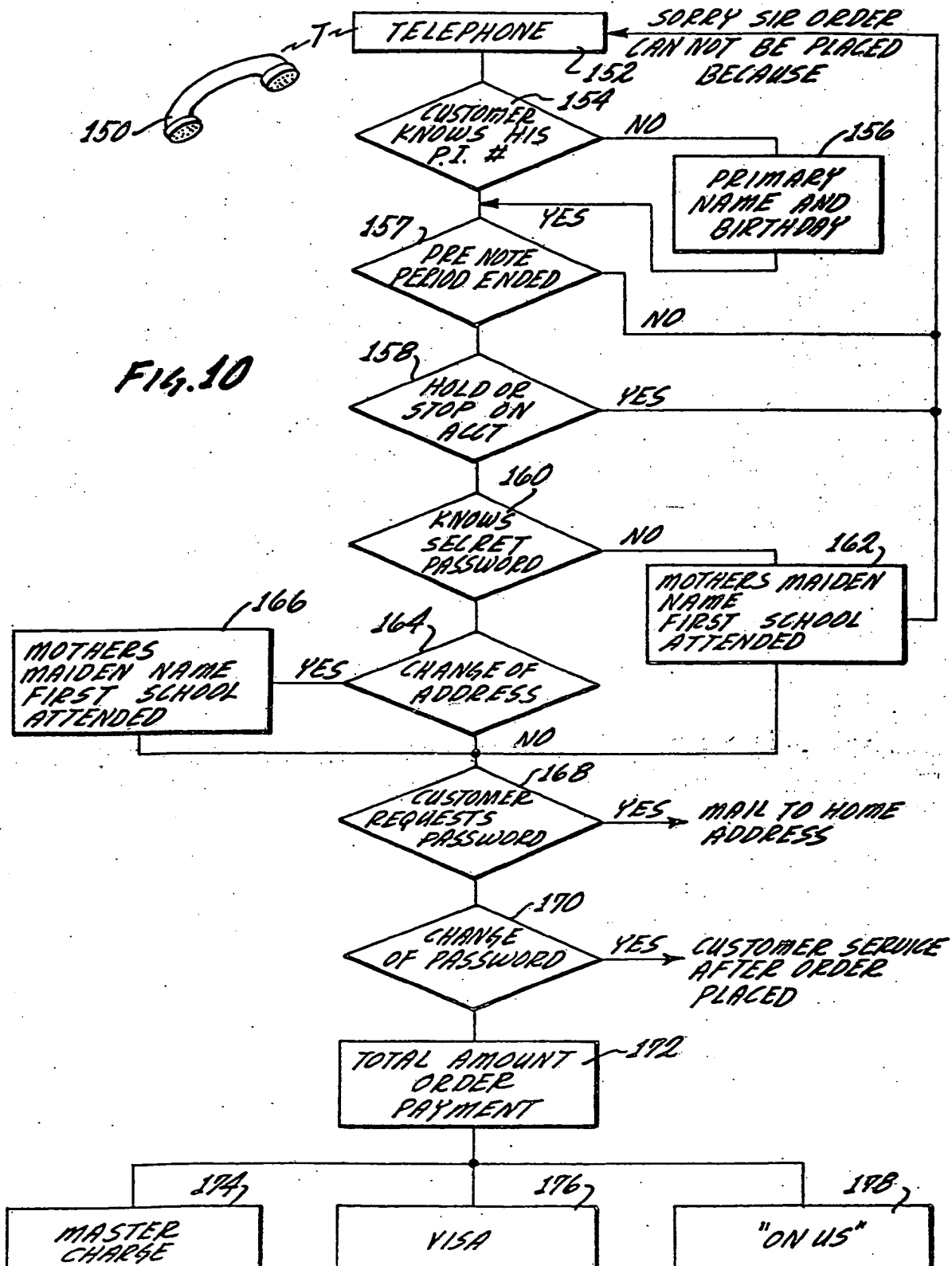
52
54
56
58

FIG. 8





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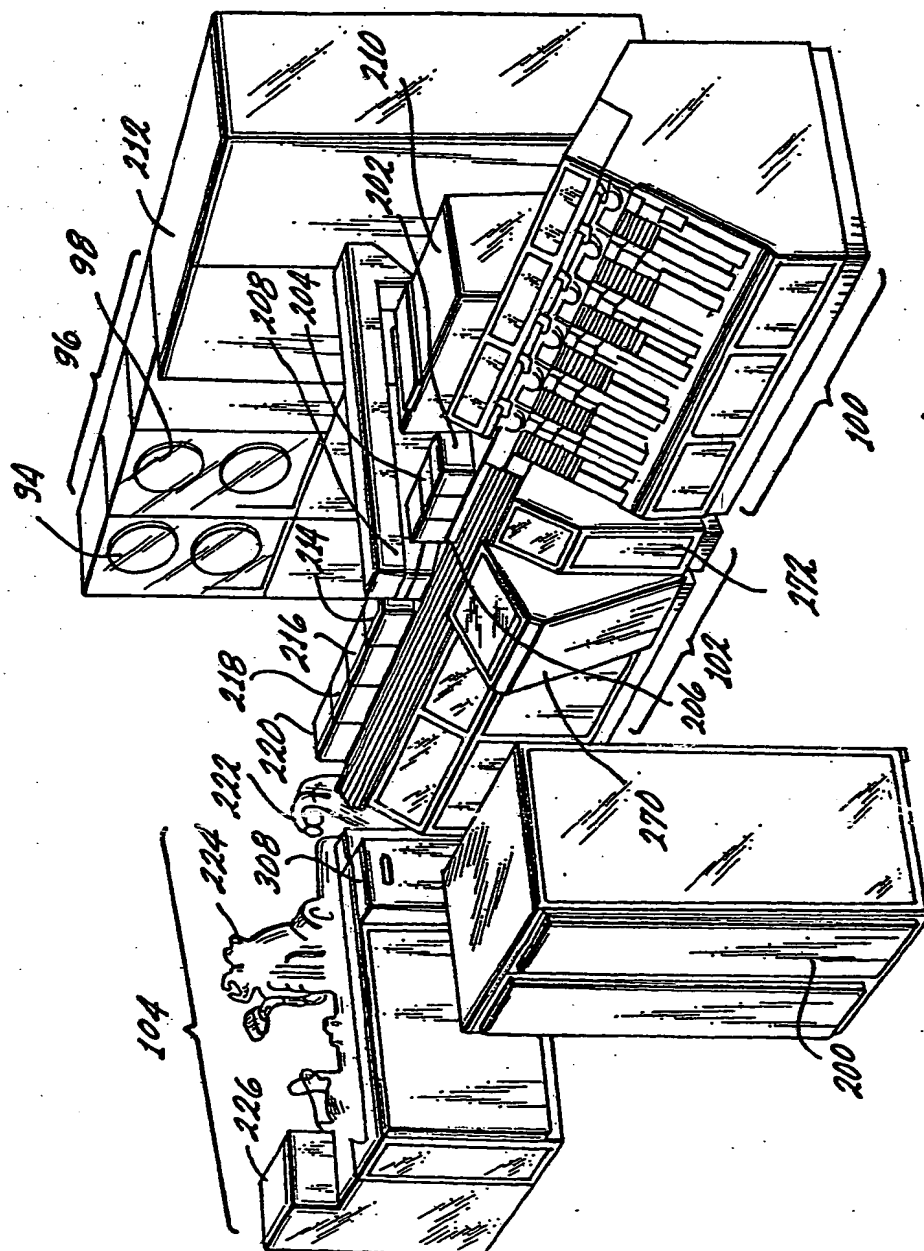
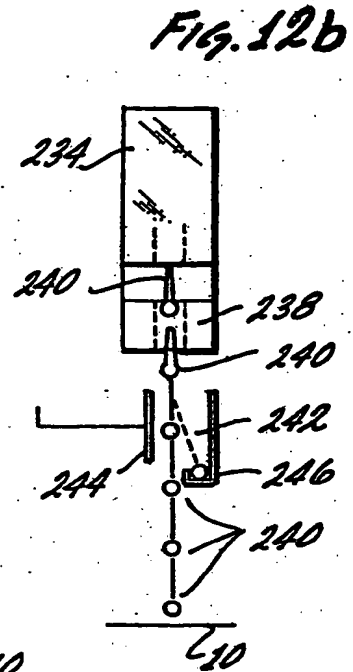
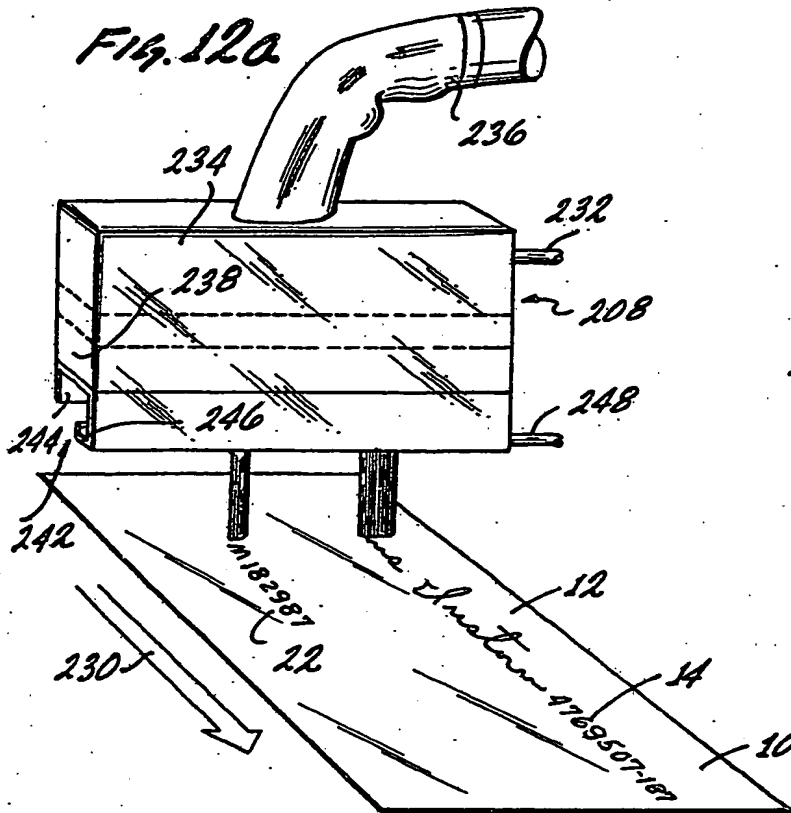


Fig. 11



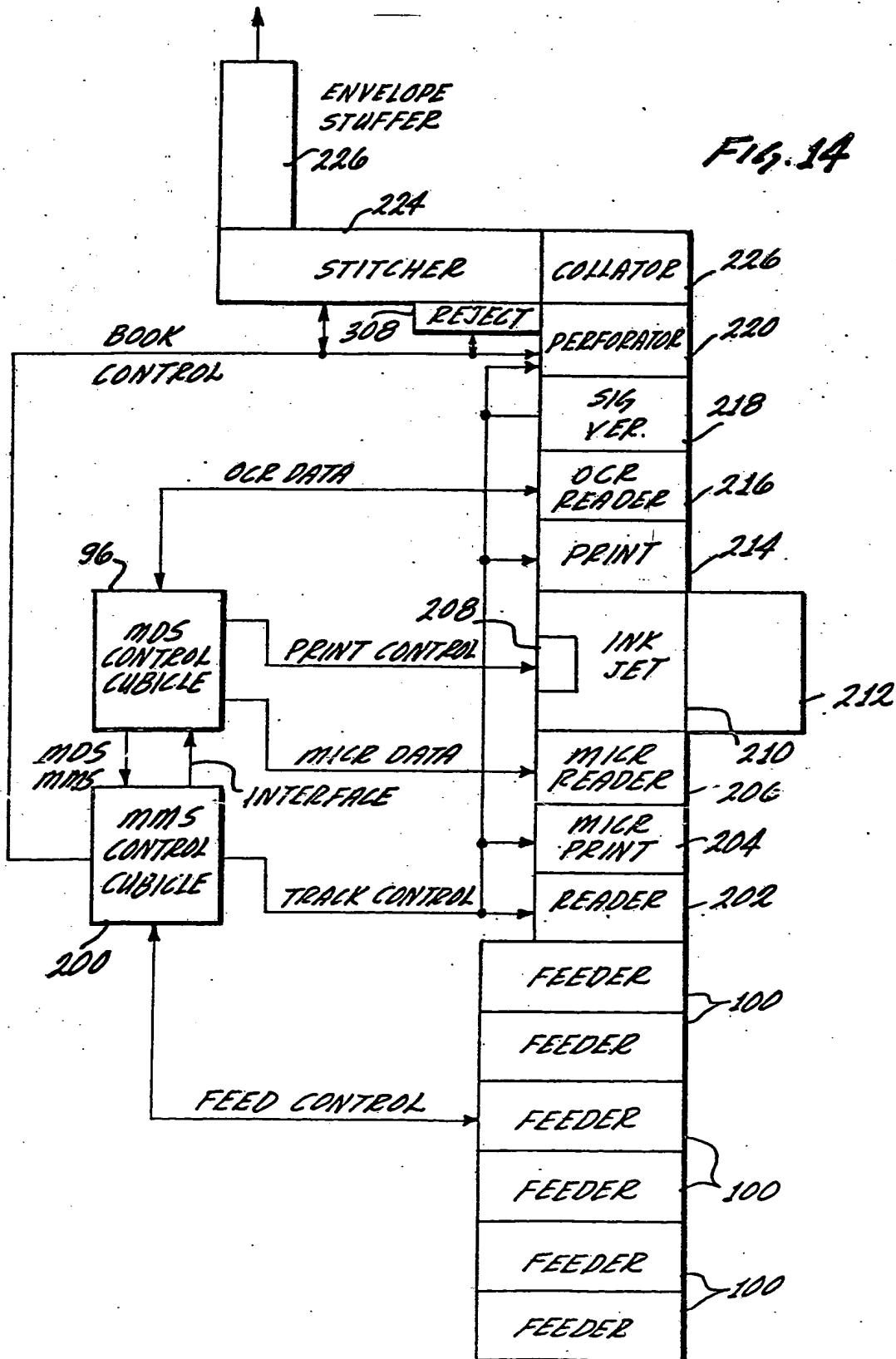
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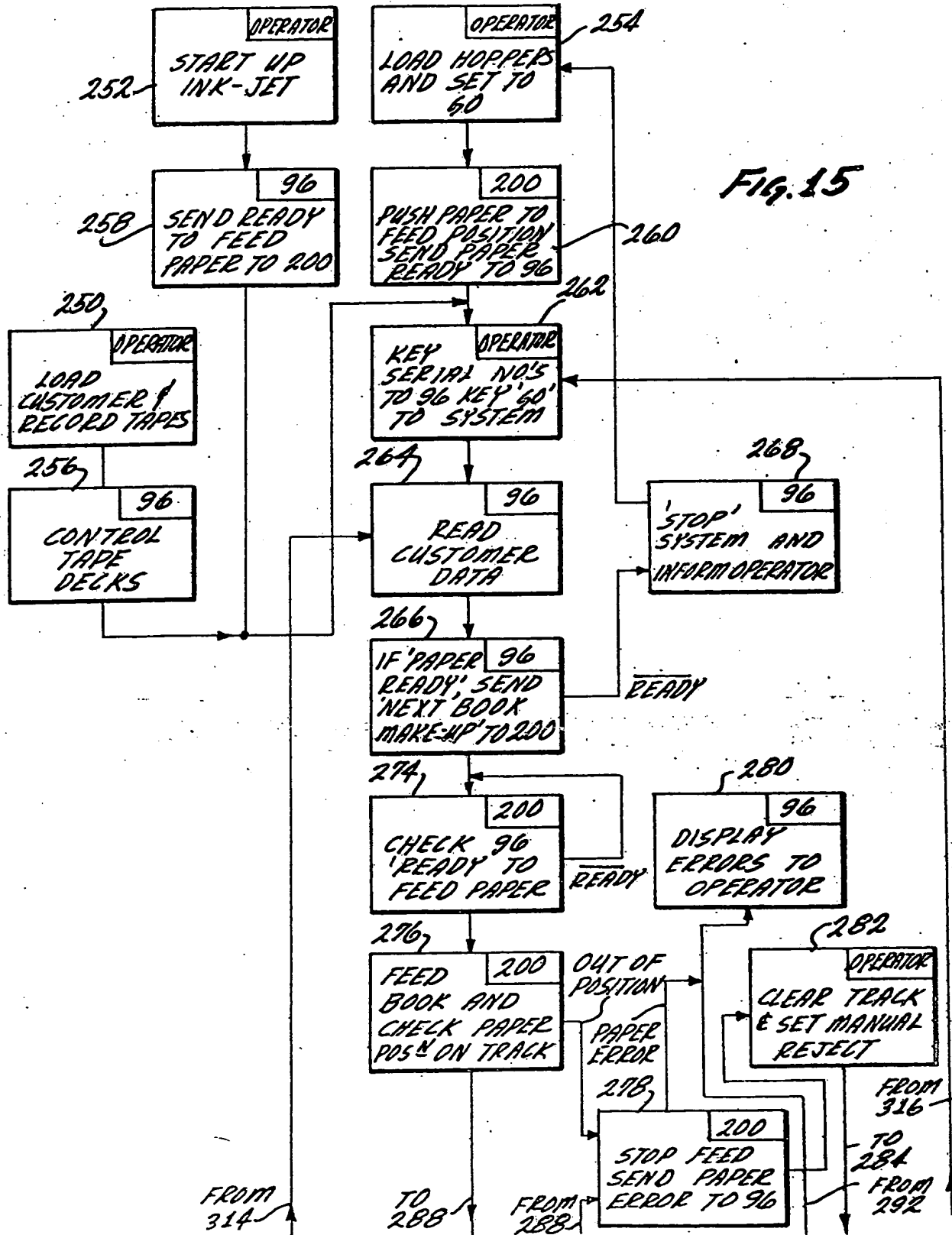


*Charles E. Johnson*

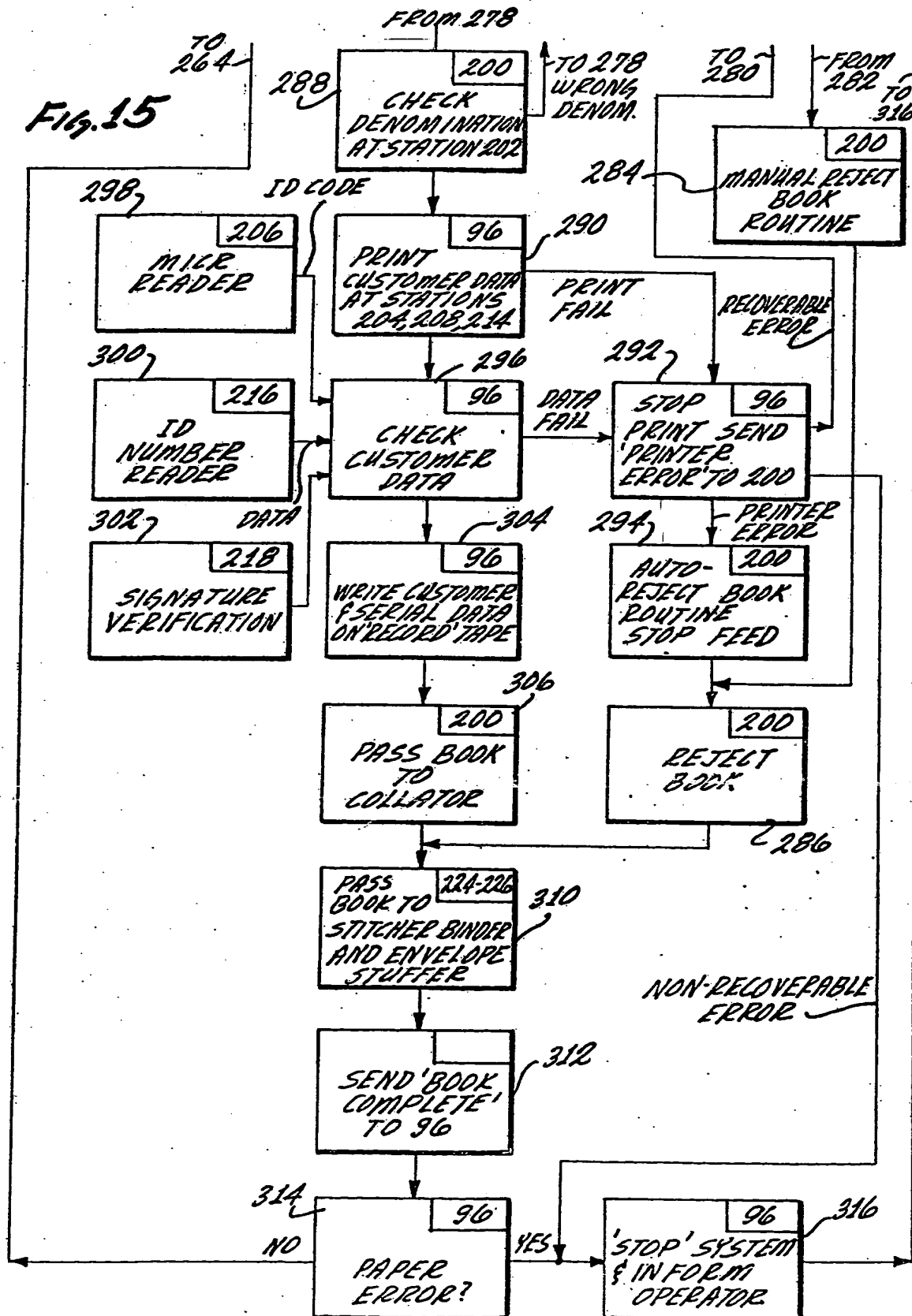
*Charles E. Johnson*

**FIG. 13**





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## SPECIFICATION

## Apparatus and method for personalizing checks

The present invention is directed to an apparatus and method for producing personalized travelers checks. Specifically, the apparatus and method of the present invention provide for the production of travelers checks presigned with a digitized replica of a customer's signature. With the apparatus and method of the present invention the customer does not have to be physically present to order the travelers checks nor does the customer have to sign each travelers check personally.

At the present time travelers checks are normally purchased by a customer who physically goes to a sales location where travelers checks are sold and purchases the travelers checks over the counter. For example, the travelers checks may be purchased at a bank or a savings and loan or other sales agents, but the purchase of the travelers checks requires the customer's presence. Specifically, the customer's presence is required since each travelers check must be signed by the customer at the time the checks are purchased. Additionally, at the time the travelers checks are purchased, the serial numbers of the particular checks purchased by the customer are recorded so that they can be identified with a particular customer's purchase of travelers checks. Unfortunately, a period of time must expire before these serial numbers are on file at a central location thereby complicating refunds or replacements of lost checks.

The present method of purchasing and dispensing travelers checks is time consuming and cumbersome to both the customer and to the sales agent such as the bank or savings and loan which is selling the travelers checks. The present system is time consuming because it requires the personal appearance of the customer and since each purchase of travelers checks by a customer is an individual operation which must be handled on a one-to-one basis between the customer and a person from the sales agent selling the travelers checks. Because the present method is time consuming and cumbersome, travelers checks have not been used as a general replacement for money.

The present method of purchasing travelers checks cannot be set up on a production basis from a centralized location since a key factor in the purchase of the travelers checks is the signing of each individual check by the customer. The present invention provides for an apparatus and method wherein the purchasing of travelers checks is processed from a centralized location and with the present invention eliminating the necessity of having the customer's physical presence to sign each travelers check. In addition, the present invention does not require a personal appearance by the customer to purchase the travelers checks, but allows for the purchase of the checks by telephone or mail. Similarly, the distribution of the checks to the customer is also

accomplished by mail or other delivery systems, again to eliminate the necessity of the customer's physical presence.

The present invention provides for an apparatus and method for processing and distributing travelers checks and with the checks personalized by being at least presigned with a digitized replica of the customer's signature. The personalization occurs at the central location and with the checks then distributed to the customer. The personalization of the checks before distribution not only eliminates the necessity of the customer's signing each check but also is a safety factor. The present invention also allows for much greater flexibility in the issuance of travelers checks to customers from a particular account. For example, a particular order of travelers checks may have some presigned with a first signature, such as the husband's, and other presigned with a second signature, such as the wife's. There may be a corporate account with a number of authorized signatures. The account may have the travelers checks issued periodically to replenish the supply of travelers checks automatically.

As a specific example, the customer may pre-enroll by filling out an application form and with the application form including an area for at least one signature. Preferably, the form includes areas for more than one signature so as to increase the flexibility of the present invention, as indicated above. Once the customer has been pre-enrolled, the customer may order the travelers checks either by telephone or by mail. Of course, the initial enrollment and the first order may occur at the same time. Once the customer has been enrolled and an account is opened, the customer data is retained permanently so that future orders may be easily accomplished. It is also to be appreciated that the customer may, of course, make a personal appearance to place an order for travelers checks, but since the present invention provides for the personalization of the travelers checks by at least a digitized replica of the customer's signature, the customer need not individually sign each travelers check.

Once an order for travelers checks has been received, the travelers checks may be processed at a central location and with the processing accomplished by automated equipment. Specifically, blank forms for travelers checks may be used and with an individual order filled with particular denominations of the blank forms. The blank forms of travelers checks may or may not have preprinted serial numbers and the blank forms may include preprinted codes so as to identify the denomination of the blank travelers check form.

The customer's signature is stored in a digitized form by scanning the signature areas of the application forms. Normally, specific customer order includes a request for particular denominations of travelers checks and the blank travelers checks are fed to a personalization area. Each blank travelers check is then personalized with at least the digitized replica of the customer's

signature. As indicated above, the serial number of each blank travelers check may be preprinted and each serial number is read and stored with the customer's order so as to provide for a complete order record. If the serial numbers are not preprinted, the serial numbers may be printed along with the digitized replica of the customer's signature and with the serial numbers of the travelers checks forming the customer's order stored to provide for an order record. The denomination codes of the individual travelers checks may be read prior to personalization so as to provide a verification of the denomination of the travelers checks used to fill the order.

Payment for the individual customer's orders may be made by debiting the customer's account, such as through a bank card or a checking or savings account. The system therefore provides for a complete audit trail and for complete order records so that if the travelers checks are lost or stolen the records facilitate the making of timely refunds to the customer. In addition, since the complete information is in a central file before the checks are sent to the customer, this prevents various modes of unauthorized cashing of the checks.

Once a particular order for travelers checks is processed at the central location, the order can be delivered to the customer by mail or other delivery systems. Since the checks have been preprinted with at least a replica of the customer's signature, this enhances the safety factor if the checks are stolen during delivery. Also, the present invention may provide for additional identifiers preprinted on the individual travelers checks so as to hinder the unauthorized cashing of the travelers checks by someone other than the customer. For example, the customer's driver's license number or passport number may be also printed on each travelers check and with this additional number used as a further identification when cashing the check.

Because the present invention does not require the presence of the customer to sign the individual travelers checks, even the existing method of purchasing travelers checks can be enhanced. For example, the customer can leave an order with his bank or savings and loan either by phone or in person and then pick up at a later time the travelers checks which have been presigned with the customer's signature. Other variations of ordering travelers checks according to the present invention include ordering travelers checks at the same time the customer makes airline reservations. When the customer picks up the airline tickets he can at the same time receive the order of travelers checks. The various methods of ordering and delivering the travelers checks are manifold, but since the customer's presence is not necessary for the signing of each travelers check, the handling and the processing of the travelers checks are enhanced and the time-consuming portion for the customer and the sales agent is eliminated.

It may also be appreciated that the apparatus and method of the present invention may be

incorporated into existing automated teller equipment. The automated teller would be modified so as to include equipment for printing travelers checks with replicas of the customer's signature and the automated teller would dispense the travelers checks presigned with the replica of the customer's signature. The customer would go to the location of such an automated teller and the customer would order travelers checks directly from the automated teller.

The apparatus and method of the present invention may also incorporate all of the numerous advantages of a centralized system. For example, the customer's account may allow for more than one person to be able to order travelers checks and for more than one signature to be preprinted on the travelers checks. The customer's file may include other personal data so that even if the customer forgets his account number he may be able to identify himself properly and thereby order travelers checks. The system may use secret passwords and other identifiers so as to hinder the ordering or cashing of the travelers checks by unauthorized persons.

With the present invention, the customer signs the application form at a particular location on the form. The signature on the application form is optically scanned and a digitized representation of the customer's signature is stored in a central data file along with other customer data. The stored data is then used as an input to a printing system, such as an ink jet printing system, to print at least the digitized replica of the customer's signature at a particular location on the travelers checks. The ink jet printing system may be used to print other data such as the serial number of the individual travelers check. The ink jet printing system may also be used to print a cover sheet for a book of travelers checks and with the cover sheet forming a mailer to facilitate the mailing of the travelers checks to the customer.

In order to ensure that the ink jet printing system has properly printed the desired data, the present invention provides for a verification that the data has been properly printed on each travelers check. The present invention therefore ensures that all of the desired information is properly printed on each individual travelers check and on the cover sheet. This ensures that incomplete or inaccurate travelers checks are not sent to the customer. Other aspects of the present invention, including the operation of a particular system for producing the personalized travelers checks, will become clearer, as will a complete understanding of the invention, upon reference to the following description and drawings, wherein:

Figure 1 illustrates a specimen of a personalized travelers check including a preprinted digitized replica of a customer's signature;

Figure 2 illustrates a specimen of a blank travelers check and with the blank including a preprinted bank identification and document serial numbers;

Figure 3 illustrates a specimen of a blank travelers check without preprinted bank

identification and document serial numbers;

Figure 4 illustrates a first embodiment of a travelers check including a first type of denomination code;

5 Figure 5 illustrates a second embodiment of a travelers check including a second type of denomination code;

10 Figure 6 illustrates a cover sheet for a book of travelers checks and with the cover sheet providing order information and serving as part of a mailer for the book of travelers checks;

15 Figure 7 illustrates a verification pattern which may be used to verify the printing of the signature and other data on the travelers checks and cover sheet;

Figure 8 illustrates a block diagram of an overall system of the present invention for providing personalized travelers checks;

20 Figure 9 illustrates a block diagram of a system for capturing the customer's signature and other data in a customer's file;

Figure 10 is a flow chart illustrating the ordering of travelers checks by telephone;

25 Figure 11 illustrates a physical layout of a production system for producing the personalized travelers checks;

30 Figures 12(a) and 12(b) illustrate an ink jet printing system for providing a printing of particular data on the travelers checks, including the digitized replica of the customer's signature;

Figure 13 illustrates both an enlarged and an actual size example of a digitized replica of a customer's signature;

35 Figure 14 illustrates a block diagram of the production system of Figure 11; and

Figure 15 is a flow chart illustrating the operation of the production system of Figure 11.

40 Figure 1 illustrates a specimen of a personalized travelers check 10 produced in accordance with the apparatus and method of the present invention. Specifically, the travelers check 10 includes at least a digitized replica 12 of the customer's signature in the normal signature position. In the prior art, the customer, when  
45 purchasing travelers checks, would sign each one of the travelers checks in the signature position in the presence of the sales agent. In the present invention the digitized replica 12 of the customer's signature is produced by automated equipment  
50 from stored information and the customer's presence is not necessary to complete the personalization of the travelers checks.

55 The travelers check 10 also includes identifying data such as a document serial number 14 and a magnetic ink coded print line 16. The print line 16 typically includes a bank identification number followed by the document serial number and may also include a denomination code as part of the serial number. The travelers check 10 may also  
60 include a separate denomination code 18 which would help in the elimination of errors in the filling of customers' orders for travelers checks, especially if the magnetic ink coded print line 16 is not preprinted.

65 The personalized travelers check 10 of the

70 present invention may be cashed in the normal manner wherein the travelers check is presented and is countersigned at the position 20 in the presence of the person cashing the travelers check. The digitized replica 12 and the  
75 countersignature at the position 20 may then be compared to ensure that the proper person is cashing the travelers check. The travelers check 10 may also include a further identifier 22 which, for example, may be the customer's driver's  
80 license number or passport number so as to serve as a further personal identification when cashing the check.

85 It is to be appreciated that although the invention is described with reference to a personalized travelers check, the word "travelers" is merely illustrative and the personalized check of the present invention may be used for purposes other than during traveling. For example, there are  
90 many businesses which pay their workers in cash. This practice is quite dangerous since on every payday a large amount of cash must be kept on hand. Personalized checks produced in  
95 accordance with the present invention may be used in lieu of payment in cash. For example, each worker would receive pay in the form of checks of various denominations personalized with digitized  
100 replicas of the worker's own signature. In this way, the worker would receive a plurality of personalized checks which are readily negotiable, but are safer than the use of cash.

105 Figures 2 and 3 illustrate specimens of blank travelers checks which may be used as the blank forms prior to the personalization of the checks by at least the replica of the customer's signature. In  
110 Figure 2, a blank travelers check 30 is preprinted with both the document serial number 14 and the magnetic ink coded line 16, as well as the denomination code 18. With the blank travelers check 30 of Figure 2, the production equipment  
115 provides for the replica of the customer's signature so as to personalize the travelers check plus any other identifiers such as the number 22. In Figure 3 a blank travelers check 32 includes only the denomination code 18. With the blank  
120 travelers check 32 of Figure 3, the production equipment provides for printing all of the identifying numbers in addition to the replica of the customer's signature.

125 With the current method of printing blank travelers checks, the various identification numbers 14 and 16 are printed as the last step in the overall printing process and while the checks are still in sheet form. The sheets are run on a  
130 numbering press with the printed number sequences running down through a stack of sheets so that when the stack of sheets is cut, the numbering sequence is in order. This printing technique requires that all of the checks be perfectly printed with the magnetic ink code print line so that all of the checks can be machine  
readable at a later time. The current practice is to inspect each check individually, which is obviously an expensive process. In addition, the prior art  
methods require that an improperly printed check

be replaced so as to maintain a complete serial number sequence.

Using the blank travelers check 32 of Figure 3, the present invention provides for the printing of the serial number 14 and the magnetic ink coded print line 16. This eliminates the prior art step of individual inspection since with the present invention the printing is checked as part of the production process. In addition, when using either of the blank travelers checks of Figures 2 or 3, the travelers checks serialization is read at the same time the customer's order is being filled so as to provide for an immediate tie-in between the customer's order and the serialization of the travelers check. This provides for a complete record which greatly facilitates the servicing of any claims of lost or stolen travelers checks.

As a further control in the apparatus and method of the present invention, the blank travelers checks 30 or 32 may also include the denomination code 18. Figure 4 illustrates a first embodiment of the positioning of the denomination code 18 and, as shown in Figure 4, the code may consist of a number of bars and with the particular number of bars representing the denomination of the travelers checks. For example, a single bar represents \$10.00, two bars \$20.00, three bars \$50.00, four bars \$100.00, and five bars \$500.00. It is to be appreciated that the denomination code may take other forms such as a binary code and may be at other positions on the travelers checks.

For example, Figure 5 illustrates a second embodiment of a denomination code including combinations of bars 33 representing the denomination with a binary code and with a second redundant group of bars 34 representing the same denomination so as to provide an even further control. In the embodiment shown in Figure 5, the denomination code is on a stub portion of the travelers check and represents a denomination of \$20.00. The dotted portions may also contain bars and with combinations of the bars providing a binary coding of the denomination. The use of the denomination code ensures that the proper denomination for the blank travelers check is used as the blank travelers check enters the equipment for providing for the additional personalization of the travelers check.

Figure 6 illustrates an additional personalization feature of the present invention wherein a cover sheet for a book of travelers checks is provided to include various personalized information. Specifically, the cover sheet 40 includes the digitized replica 12 of the signature of the customer. In addition, a portion 42 of the cover sheet 40 provides a summary of the customer's order and is printed with specific information to enable the customer to check the order and to have a summary readily at hand. A mailer portion 44 of the cover sheet 40 is used to print the customer's name and address and may be used in combination with an envelope having a window to provide for the mailing of a book of travelers checks to the customer. An area 46 of the cover

sheet 40 indicates to the customer the number of books which were required to fill the order.

During the personalization of the travelers checks and the cover sheet, bar verification patterns 48 and 50 may be printed so as to verify that the printing system is operating properly. As shown in Figure 5, the bar verification patterns are shown printed on the travelers checks as the individual travelers checks are personalized. Figure 6 illustrates the same bar verification patterns 48 and 50 on the cover sheet 40.

In a particular embodiment of the invention the printing is accomplished using an ink jet system and the bar verification patterns 48 and 50 are produced by the ink jet system to verify that each ink jet is functioning. The bar verification patterns are printed after all of the other information has been printed at a position following the other printed information. The bar verification patterns are then scanned after the cover sheet 40 and travelers checks have been personalized and if the bar verification pattern has been correctly printed it is then assumed that all of the previously printed information has been properly printed.

Figure 7 specifically shows an enlarged version of the bar verification pattern 48 and it is to be appreciated that the pattern 50 would be the same. The travelers checks would be fed for printing in the particular direction as designated in Figure 7. The bar verification pattern 48 includes four columns of dots 52 through 58 and with each column offset one row from the next column. Each column includes fifteen pair of dots. The bar verification pattern also includes a portion 60 which forms a single column of dots. Specifically, the bar verification pattern is formed from a portion of the ink jet system which includes a total of sixty dots spaced next to each other along a distance of one-half inch. This provides a resolution of one hundred twenty points per inch in the vertical direction and the system has the same resolution along the horizontal directions. As can be seen in Figure 7, the bar verification pattern 48 provides for an accurate check of the printing of data since the pattern represents the proper operation of all of the ink jets in particular areas.

Figure 8 illustrates a block diagram of an apparatus and method for producing the personalized travelers checks of the present invention. As shown in Figure 8, the customer would initially fill in an application form 80, which application form may include specific identification material. In addition, the application form 80 would include at least the customer's signature 82 in a particular location on the application form. Additional signatures 83, such as for the customer's spouse, children, employees, etc., may also be included on the form 80 and a block 100 may be checked if more than one signature appears on the form 80. Other information such as home and business addresses, mode of payment, personal identifiers, such as mother's maiden name and first school attended, may also be included. A password may



also be selected by the customer and entered on the form 80. The form 80 may also include a preprinted number 102 which serves as a control number during the initial processing.

5 Each application form 80 may be processed to determine if an account is to be opened and if so the application form 80 including the signatures 82 and 83 may be processed through a signature capture scanner 84 to produce digitized  
10 information representative of the signatures. The preprinted number 102 serves as a control number during the initial stages. In addition, the other information and the credit information may be entered as shown by block 86 and with all of  
15 the information stored in a customer data base file storage 88. Each customer account may be given an account number and the customer is given this number for future use.

The data base file storage 88 serves as a basic  
20 repository of information so as to provide for the batch processing of customers' orders for travelers checks. As an example, requests for travelers checks may be made directly by phone or mail by the customer or may be made indirectly through  
25 various agents for the customer. These requests for travelers checks would come in to a central location and be processed through a controller 90. If the travelers check order is to be charged to an account, then the controller may request  
30 authorization for the charge from existing credit authorization.

In addition, if the identity of the customer is to be verified, this may occur using the data base file storage 88. If the order is authorized and the  
35 customer properly identified, then the particular travelers check order is stored on a disk memory 92 for file storage of the orders.

The order is also recorded on a tape 94 and with each tape 94 providing for the storage of a  
40 batch of orders. The information recorded on the tape 94 may include the digitized information representing the customer's signature but it would not be necessary to include this information on the disk memory. The tape 94 may be removed and  
45 replaced by a new tape after a full complement of orders is stored on the tape 94. The tape 94 may now be transferred for use as part of a production system including a travelers check production controller 96. The production controller 96 uses  
50 the information on the tape 94 during the processing of orders for travelers checks. As the orders are processed, the production controller 96 also makes a tape of the various completed transactions 98 so as to form a transaction log  
55 tape. This tape may be used to provide for a complete closure to the customer files so that a complete record is kept of each customer's orders.

In general, the production controller 96 controls  
60 a production unit which includes a dispensing section 100 for dispensing different denominations of travelers checks. These travelers checks are then processed through a personalization and printing section 102 so that the checks are personalized with at least the  
65 customer's signature and possibly serial numbers

and other identifying information. Finally, the various orders are packaged for transportation by a section 104. At this point the checks are ready to be sent to the customer.

70 Figure 9 illustrates an optical scan system for use in capturing the signature of the customer which has been written on the application form 80 illustrated in Figure 8. As described above, the application form 80 includes positions for a  
75 plurality of signatures, such as the signatures 82 and 83. In addition, the application form includes the box 101 which is checked if more than one signature is on the application form. The application form 80 also includes a preprinted  
80 number 103 to serve as the control until the account has been cleared and given a particular account number.

The use of a plurality of signatures as part of a  
85 single account allows for the system to provide travelers checks with different signatures depending on the need of the customer. For example, the application form 80 may allow for signatures of both the husband and wife so that when an order for travelers checks is made, the  
90 customer may specify that a particular group of the travelers checks include the digitized replica of the husband's signature, while another group of travelers checks may have the digitized replica of the wife's signature. The account may be a  
95 corporate account and with a number of different employees' signatures stored so that travelers checks may be ordered for particular ones of the employees.

The various application forms are stacked  
100 together in an input hopper 105 and with each application form 80 being fed individually from the input hopper to a scanning tower 106. The scanning tower 106 may be any type of standard scanning device such as an image dissector tube  
105 to provide for a high resolution reading of the information contained in particular positions on the application form. For example, the scanning tower 106 provides for a reading of the preprinted number plus the individual signatures such as the  
110 signatures at the positions 82 and 83. The scanning tower, therefore, provides for a high resolution reading of particular information on the application form.

After each application form 80 is read it is  
115 transported to an output hopper 107. The control of the movement of the application forms through the scanning tower and the reading of the information are provided by a scanner control 108. The information read when each application  
120 form is in the scanning tower 106 is also sent to the scanner control 108. Typically the information at this point would be in an uncompressed form and consist of the signature data and the preprinted number data. The uncompressed  
125 information from the scanning tower is fed through a computer 110 to provide compression of the data to a more compact form and with the compressed data then recorded on a tape 112.

In order to ensure that the signatures have been  
130 accurately digitized by the optical readout

provided by the scanning tower 106, the information on the tape is reproduced and verified by the verification portion 114. Specifically, the data is read out of the tape 112 and displayed on a terminal 116 including a visual display such as a CRT tube. An operator 118 visually scans the representation of the signatures and verifies the preprinted numbers. The signatures and numbers which are properly recorded are then further recorded on an additional tape 120.

The application forms may also include other identifying information, such as the customer's home and business addresses, birthdate, mother's maiden name, name of first school attended, credit information, etc. The application forms are therefore taken from the output hopper 107 and read by an operator. The operator would then keypunch the information, as shown at position 122, and after verification as shown at portion 124, the additional information is recorded on a tape 126.

Both the tapes 120 and 126 now contain information regarding a particular customer and with this information correlated by a preprinted number 103 on the application form 80. The information on the tapes 120 and 126 is now stored in the customer file 88 and used as part of the further production system as shown in Figure 8. The preprinted number may be used as the account number or at the time the information is stored in the customer file 88 a new account number may be given to the particular customer. In either case, the customer would have a specific account number which is used as identification when orders for travelers checks are made at a future time.

Figure 10 illustrates a typical flow chart for the entry of an order for travelers checks. As an example, the order is shown by telephone to a central station. It is to be appreciated that the order may also be processed through a terminal such as the type now currently being used in banks. In either case, whether by direct telephone contact with an operator or through a terminal, two-way communication is established between the customer and the central processing station. It is also to be appreciated that the order may be made by mail.

As shown in Figure 10, a customer 150 establishes, through a telephone link 152, communication with the central station. Generally the customer has previously opened an account and has stored in the customer data base file storage 88, shown in Figure 8, various identifying information. This ensures that the customer is properly identified when making the telephone order for travelers checks. Specific examples of the use of particular identifying information is shown in the flow chart of Figure 10, but it is to be appreciated that other identifying information may be used.

As a first step, the customer may provide identification by supplying his particular account number. This step is shown by block 154. If the customer knows his particular account number

then the operation passes on to the next step. If the customer does not know his account number, he is requested by the operator to identify himself by his name and birth date as shown by block 156. If the customer knows that information, then he is passed on to the next step. If not, the customer is told that the order cannot be placed. The operator, of course, retrieves the information from the data base 88 and determines that the information is correct at appropriate points in the entry of the order.

Assuming that the customer can supply either his particular account number or his name and birthdate, then the operator checks to see if the customer is allowed to purchase travelers checks at this time. For example, after a customer initially sends in an application form, a period of time must pass to ensure that credit has been authorized. Also, the system may be checked to determine if there is a hold or stop on the particular account. These steps are shown by the blocks 157 and 158.

If the various preconditions are met, then the customer is questioned for his secret password. This is shown by block 160. If the password is not known, then the customer may still verify his identification by giving further information such as his mother's maiden name and the name of his first school attended. This verification step is shown by block 162. If the customer is verified by the additional information, the order may be entered but the customer cannot make any on-line data changes. For example, the customer cannot request the use of an alternate mailing address.

If, on the other hand, the customer does know his secret password, he can request an alternate mailing address as shown by block 164. However, the customer then must further identify himself such as by giving his mother's maiden name and the name of his first school attended. This step is shown by block 166.

If the customer does not know his password but has properly identified himself as shown by block 162, the customer may at this time request the forgotten password. This step is shown by block 168. However, the password information is not given to the customer by telephone but is sent to the customer at his home address. In addition, if the customer requests a change of password, which step is block 170, this request is transferred to a customer service branch after the order is taken at which time specific arrangements are made for a change of the password.

Once the customer's identification has been properly established then the operator will request the total amount of the order for travelers checks and request the method by which payment is to be made. This step is shown by block 172. The customer may also request specific denominations of travelers checks to fill the order. The method of payment may be made by credit cards such as by the blocks 174 and 176 representing Master Charge and VISA. In addition, payment may be made by other methods such as shown by block 178 representing an account established directly

with the seller of the travelers checks.

It is to be appreciated that the customer may also request that the order be split into a number of separate orders and with these orders paid for by different methods of payment. Also, the separate orders may be sent to different addresses or to different people. All of the above can be easily accomplished from the central station.

As an additional feature of the present invention, the operator may request that the customer specify an additional cashing identifier which may be printed on all of the travelers checks. For example, the customer may use his driver's license number, passport number, a credit card number, etc. as a further identifier to be printed on the travelers checks. When the travelers checks are cashed at a later time, the additional identifier will enable the person cashing the travelers checks to have a further means of identification.

As shown in Figure 8, the various orders are recorded on a tape 94 and are also stored on a disc memory 92. Once a sufficient number of orders has been stored on the tape 94, this tape is handed off to the production system so as to be used during the production of travelers checks orders on a batch basis. Figure 11 illustrates a perspective view of various component sections of the production system generally shown in Figure 8. In particular, the production system includes a production controller 96 operating in conjunction with tapes 94 and 98. The multi-denomination travelers checks dispensing section is provided by a paper feed unit 100. All of the personalization and printing is provided in the section 102. The packaging and transportation is provided in the section 104. In addition to the sections generally described above, various control units control the various sections of the production system.

As indicated above, the production controller 96 provides for the overall system control and specifically provides this control in accordance with a batch of orders stored on the tape 94. As the various orders are produced by the particular sections of the production system, a log of the various orders which are filled is stored on the additional tape 98. The tape 98 then may be used to update the customer files and thereby form a complete record of customer orders.

As each order is filled, the various denominations of blank travelers checks are fed from the paper feed section 100. Specifically, the paper feed section 100 includes a total of six dispensers which provide for storage and dispensing of five denominations of travelers checks, shown in Figures 2 through 5, and the cover sheet shown in Figure 6. As indicated above, the various denominations may be \$10.00, \$20.00, \$50.00, \$100.00 and \$500.00. The individual travelers checks in the particular denominations needed to fill each order are dispensed from the paper feed section 100 and are fed through the personalization and printing section 102. The controller 96 provides for the

overall control but a separate controller 200 provides for the individual control of the paper feed section 100 and the printing and personalization section 102. As the individual blanks, including the travelers check and the cover member, are transported down the length of the personalization and printing section 102, the blanks pass by a number of separate stations. Each station may provide for a particular function for providing the personalization and printing of the blank travelers check and cover member.

Specifically, a first station 202 may provide for a reading of the denomination code 18 which may be present on each travelers check. This denomination code has been described with reference to Figures 1 through 5. The reading of the denomination code ensures that the proper denomination travelers check is fed from the paper feed portion 100. A station 204 provides for a printing of the magnetic ink coded line 16 shown in Figure 1. If this magnetic ink line has been preprinted then the station 204 is not used. In either case, a station 206 provides for a reading of the magnetic ink coded line. This ensures that the magnetic ink coded line is properly printed and also provides for a correlation of the particular serial number of the travelers check with the specific customer's order. The serial number for each travelers check is therefore completely identified with an individual customer's order.

At the next station 208, an ink jet mechanism provides for the printing of a digitized replica of the customer's signature. The ink jet equipment is housed in a cabinet 210 and the control of the ink jet is provided by an ink jet controller 212. In addition to the printing of a digitized replica of the customer's signature, the ink jet system may also provide for printing of the serial number 14 in Gothic letters as shown in Figure 1. Also, the ink jet system may print the additional information such as the customer's name and address and other information on the cover sheet 40, as shown in Figure 6. It is to be appreciated that the serial number 14 may be preprinted on the travelers check as shown in Figure 3.

A station 214 may provide for the personalization of the travelers check with a particular bank identification so that many different banks or other entities may be identified as the issuer of the travelers checks. The serial number 14 is verified by an optical reader at the station 216. This again ensures that the proper serial number for the travelers check has been printed and can further tie in the specific serial number to the customer's order.

In addition to reading the serial number at the station 216, the replica of the customer's signature and the address may be verified by an optical reader at the station 218. This provides a final check to ensure that the travelers check as completed has been properly personalized with the customer's signature. The travelers check may now be perforated at station 220 to form a check portion and a stub portion and the travelers check is now transferred to the packaging and

transportation section 104.

Specifically, a group of travelers checks is collated into an individual book or a plurality of books by the collator 222 to form the order. If there are any rejects, they would be rejected at the output of the collator 222 to a reject bin 308. Each book of travelers checks includes a cover sheet as shown in Figure 6. The individual books are stitched and bound by a stitch binder 224. After each package is stitched and bound it is then stuffed by an envelope stuffer 226 into an envelope having a window so as to show the name and address portion of the cover sheet. The individual book of travelers checks forming the customer's order is now ready to be mailed or delivered in some other fashion to the customer.

Figure 14 illustrates a block diagram of the production system of Figure 11 and specifically illustrates the interrelationship of the controllers and the other components of the system. The controller 96 provides for the overall control of the system. The controller 200 provides for the specific control of the paper feed section 100 and the transporting and tracking of the papers, including the travelers checks and cover sheets, through the various stations. The ink jet control 212 is shown to be adjacent the ink jet station and provides control of the ink jet printing of information on the travelers check and cover sheets.

Figures 12(a) and 12(b) illustrate in more detail the operation of the ink jet printer at the station 208 and specifically illustrate the ink jet printer providing for the printing of specific information on a travelers check. As shown in Figures 12(a) and 12(b), the particular travelers check 10 is transported through the ink jet station 208 in the direction shown by an arrow 230. A supply of ink is provided through a tube 232 to a drop generator 234. The drop generator provides for individual drops of ink being supplied along a line perpendicular to the arrow 230. As shown in Figure 7, there may be 120 individual drops of ink per inch. The drops of ink may extend across substantially the height of the travelers check and, for example, may extend across a distance of two and one-half ( $2\frac{1}{2}$ ) inches for a total of 300 individual drops of ink. As shown in Figure 12(a), a group of individual drops such as 60 drops of ink extending over a half inch distance may provide for the printing along the signature portion of the travelers check and a group if individual drops such as 30 drops of ink extending over a quarter inch distance may provided for the printing along the identifying number portion 22 of the travelers check.

As shown in Figure 12(a), the individual drops are directed toward the travelers check 10 and, by providing proper control of the passage of a drop to the paper, the drops form the digitized replica 12 of the customer's signature. The drops may also form the document serial number 14, the identifying number 22 and the other printed information on the travelers check and cover sheets. The particular control of the individual

drops is supplied to the ink jet printer through a bundle of control cables 236 and with the actual control of the individual drops provided by the controller 212 shown in Figures 11 and 14. As shown in Figure 12(b), the individual drops 240 each fall through an individual charge tunnel 238. Each drop 240 may be either charged or uncharged as it passes through each charge tunnel 238 in accordance with the control provided to each charge tunnel 238 by the controller 212 through an individual one of the bundle of cables 236.

The drops 240 further pass through a deflection tunnel 242 which includes a deflection plate 244 having a high negative potential to one side and a gutter and ink return 246 to the other side. If a charge is placed on a particular drop 240, the charged drop will be repelled by the deflection plate 244 and directed to the gutter and ink return 246. The charged drops will fall into the gutter and ink return 246 and be returned to the ink supply through an ink return 248. If it is desired to have an individual drop of ink 240 continue on to the paper, such as the travelers check 10, then the particular drop 240 is not charged and is therefore not affected by the deflection plate 244 and the uncharged drop freely falls through the deflection tunnel 242 to contact the travelers check 10. Therefore, individual drops of ink 240 may be uncharged when it is desired to have them fall to the travelers check 10 or cover sheet to provide for the proper printing of information on the travelers check 10 or cover sheet.

It is also to be appreciated that, as shown in Figure 12(a), a first particular group of the drops of ink is shown to provide for the printing of the serial number 14 and the digitized replica of the signature 12 and a second particular group of the drops of ink is shown to provide for the printing of the identifying number 22. Other groups of the drops of ink are provided to print the other information such as the name and address and the other information on the cover sheet, all as shown in Figure 6. It is also to be appreciated that it would be possible to provide all of the different information on the travelers check or cover sheet using other types of printing systems such as an ink jet system having a single jet and with a control of the jet to form the particular printing. Also, the printing system may use a single group of drops of ink and transport the travelers check or cover sheet a number of times through the ink jet station. One particular advantage of the ink jet system is that the ink penetrates the paper and is virtually impossible to remove without detection. This substantially eliminates the possibility of altering the signature if the checks are lost or stolen.

Figure 13 illustrates a particular example of a signature which has been printed using the ink drop system of Figures 12(a) and 12(b) and specifically illustrates the resolution of the signature. In Figure 13, the printed signature is shown in actual size and enlarged to four times the actual size. It can be seen in the enlarged

version of the signature that the signature is formed by the plurality of individual dots produced by the individual drops of ink. The resolution of the signature is, in a particular example, 120 points per inch in both the horizontal and vertical directions. It is, of course, to be appreciated that the resolution can be either increased or decreased, depending upon the desired resolution, but the particular resolution illustrated has been found to provide for an adequate replica of a customer's signature.

In the actual size version of the signature in Figure 13, it can be seen that the digitized nature of the signature may be difficult to discern. The digitized replica of the signature looks substantially like an actual signature to a person cashing the travelers check. More importantly, the signature provides for an accurate replica of the actual signature so that the person cashing the travelers check may be able to make a proper comparison between the signature on the travelers check and the countersignature which the customer signs in the presence of the person cashing the travelers check.

Figure 15 illustrates a flow diagram of the operation of the production system and specifically the production system shown in Figures 11 and 14. The flow diagram is shown as a series of blocks representing the various operational steps. In the right hand corner of each block is a numeral representing the particular portion of the system shown in Figures 11 and 14 which controls the particular operational step. For example, the majority of the blocks include either the reference numerals 96 or 200, which represent the two main controllers in the production system. Specifically, the controller 96 provides for the overall system control, including the handling of the information and the printing and verification, while the controller 200 provides for the specific control of individual hardware portions of the system, including the paper feed section designated by reference numeral 100, and the packaging and shipping section represented by reference numeral 104.

Generally, the operation of the production system is initiated by an operator, as shown in the upper righthand corner of blocks 250, 252 and 254. Block 250 represents the step of the loading by the operator of the tapes 94 and 98 into the controller 96. The tape 94 has stored information representative of a batch of customer orders and the tape 98 records the filling of these orders by the particular system. The operator also starts up the ink jet system, as represented by the block 252. Finally, the operator loads all of the hoppers of the paper feed section 100, as represented by the block 254.

When the tapes 94 and 98 are properly loaded, the controller 96 is now ready to provide control of the tape decks, as shown by block 256. Also, when the ink jet system is properly started, the controller 96 sends a "ready" signal to the controller 200 to indicate that the paper is ready to be fed, as represented by block 258.

Concurrently, the controller 200 initially controls the paper in the different hoppers to the feed position and indicates to the controller 96 that the paper is now ready to be fed and transported through the stations. This step is represented by block 260. At this point in the operation, the system is now ready to process a batch of orders for travelers checks. The operator may now key into the controller 96 the initial serial number which is to be used for the first order of travelers checks and also keys a "go" order to the system. This step is represented by block 262.

At this point in the operation, the system is now ready to provide for the filling of customers' orders. The first step, as shown by block 264, is to read the customer data from the tape 94. This is under the control of the controller 96. If the controller 96 has received a "paper ready" signal from the controller 200, then the controller 96 sends to the controller 200 the makeup of the next book of travelers checks to be produced. This step is shown by block 266. If the controller 200 indicates that the paper feed is not ready, then a "not ready" signal is provided back to the controller 96, as represented by block 268, and the system is stopped and the operator informed. As shown in Figure 11, the production system may include a console 270 and a display 272 so as to provide a central station from which the operator may give controls to the system and by which the operator may receive informational signals from the system. For example, as shown in step 268, the operator may be informed on the display 272 that the paper feed section 100 is not ready.

In the next step of the operation, as shown by block 274, the controller 200 responds to a "ready to feed" signal from the controller 96. The steps 266 and 274, therefore, provide that the paper cannot be fed to the printing and personalization portion 102 of the system shown in Figure 11 until both the controller 96 and the controller 200 are ready to proceed. When both of the controllers are ready to proceed, the next step, as shown by block 276, provides for the controller 200 controlling the feeding of the paper from the paper feed section 100 for a book of travelers checks. Each paper is checked for position on the track before it exits the paper feed section 100 and if the paper is out of position, the controller 200 provides for the feeding to be stopped. This step is shown by block 278.

If the feeding of paper is stopped, a "paper error" signal is sent to the controller 96 and the controller 96 provides a display to the operator of "paper error" on the display 272. This step is shown by block 280. Block 282 represents the step of the operator clearing the track and setting a manual reject into the system. The manual reject provides for a reject of the particular travelers checks which were out of position on the track. This manual reject operation is controlled by the controller 200, as shown by block 284. The actual reject of the book of travelers checks is represented by the step 286 and occurs at a later

portion in the operation of the system.

If the papers, including the travelers checks and the cover sheet, are properly positioned on the track, then the denomination of each travelers check is checked in accordance with either the denomination code shown in Figures 4 and 5 or as part of the magnetic ink coded line. The step of checking the denomination is shown by the block 288. If the denomination of the travelers check is not correct, then a "wrong denomination" signal is sent to the controller 200, as shown by the step 278, and the paper is rejected by the steps 280, 282, 284 and 286.

If the papers, including the travelers checks and the cover sheet, are properly positioned and if the travelers checks have the proper denomination, the each paper passes through a series of stations 204, 208 and 214, as shown in Figures 11 and 14. The controller 96 controls the printing of the various information on the paper at the different stations. The station 204 prints the magnetic ink coded information. The ink jet station 208 prints the digitized replica of the signature, the serial number in Gothic letters and the other information on the cover sheet 40. The station 214 produces a bank personalization printing or the personalization of the particular organization issuing the travelers check.

The various printing steps are together represented by the block 290. If there is a failure in printing at any of the print stations, a "print fail" signal is produced. As shown by the step represented by block 292, the controller 96 provides for the stopping of the printing and sends a "printer error" signal to the controller 200. When the controller 200 receives the "printer error" signal, as represented by the block 294, the controller 200 provides for an automatic reject of the printing routine and stops the feeding of paper from the paper feed section. In addition, the controller 200 provides for the rejecting of the entire book of travelers checks, which includes those which are improperly printed. This step is represented by the block 286.

If the printing at stations 204, 208 and 214 is physically accomplished, the production system also provides for a check of the quality of the printing by checking the customer data. This step is represented generally by the block 296. In particular, as shown by blocks 298, 300 and 302 all providing input signals to the block 296, the printing is read at stations 206, 216 and 218, shown in Figures 11 and 14. At the station 206, as represented by the block 298, the magnetic ink coded information is read. At the station 216, as represented by the block 200, the serial number is optically read. Finally, at the station 218, as represented by the block 302, the signature is verified by optical scanning. If any of the printed data is improperly printed, as represented by block 296, a "data fail" signal is produced and this signal is sent to the controller 96 to provide for a rejection of the book of travelers checks.

If the data is properly printed, then in the next step, as represented by the block 304, the

controller 96 provides for writing the various customer data, including the serial numbers of the issued travelers checks, on the recording tape 98 shown in Figure 11. The personalized travelers checks and cover sheet are then passed to the collator, as shown by block 306.

If there had been a reject signal produced in the system, then the travelers check would be rejected at this point in the operation. Specifically, as shown in Figure 14, the reject bin 308 is shown to be provided at one of the output positions from the collator 226. If there is no reject signal, then the book of travelers checks is passed to the stitcher binder and then to the envelope stuffer, as represented by block 310. At this point in the operation, the production system has now produced a particular book of travelers checks representing either a complete order or a part of an order. The controller 200, therefore, indicates that the book is complete, as represented by block 312.

If the book of travelers checks is complete and if there was no paper error, as represented by block 314, then the controller 96 provides for the reading of further customer data, as shown in step 264, and the operation starts over again. If there was a paper error or a printer error, as shown by the inputs to the block 316, then the system is stopped and the operator informed so as to correct the error before printing the next book of travelers checks. It is to be appreciated that the system may not actually be stopped for every error which is detected but that some errors may only require that an individual check or book of checks be discarded and a substitute check or book be prepared. The substitute book may have serial numbers replacing those which were previously used so as to provide for continuity in serial numbers. In the present invention this is described as being done manually by the operator but, as indicated above, this could be accomplished in an automatic manner and with only repetitive errors shutting the system down.

The present invention, therefore, provides for the personalization of a check with at least a digitized replica of the customer's signature. This check may be provided as a travelers check and with the check cashed as travelers checks are normally cashed. However, with the present invention the customer does not have to make a personal appearance in order to obtain the checks, since the checks do not have to be signed by the customer at the time they are issued. The checks may be ordered by telephone or by mail or can be automatically sent on an automatic replenishment basis. For example, the personalized checks of the present invention can be used to provide for a company payroll in place of paying employees in cash or by company check.

The present invention allows for a number of signatures stored under a single account number so that the checks may be ordered to be sent with different signatures. For example, both the husband's and wife's signatures may be on file and when the checks are ordered the checks may



be personalized with a particular number of checks presigned with the digitized replica of the husband's signature and with a particular number of checks presigned with the digitized replica of the wife's signature.

Although the invention has been described with reference to a particular embodiment, it is to be appreciated that various adaptations and modifications may be made and the invention is only to be limited by the appended claims.

#### CLAIMS

1. Apparatus for providing a personalization of a blank check form with particular customer information and with the personalization for use as identification when the personalized check is presented for cashing, including

means for storing information representative of a replica of a particular customer's signature, means for storing a plurality of blank check forms for use or personalization with the particular customer's signature, a printing station for printing information on the blank check forms;

means coupled to the means for storing the blank check forms and to the printing station for transporting individual ones of the stored blank checks to the printing station, and means coupled to the printing station and responsive to the stored information for controlling the printing at the printing station of the replica of the particular customer's signature on individual ones of the blank check forms.

2. The apparatus of claim 1 including additional means for verifying the printing of the replica of the customer's signature and for providing a reject of the check if there is no verification that the check is properly printed with the replica of the customer's signature.

3. The apparatus of claim 1 additionally including means coupled to the blank check forms for printing a magnetic ink coded line of information on the individual ones of the blank check forms.

4. The apparatus of claim 3 additionally including means for reading the magnetic ink coded line of information printed on the blank check forms and for providing a reject of the check if the check is improperly printed with the magnetic ink coded line of information.

5. The apparatus of claim 1 additionally including means for providing serial number information for the individual ones of the blank check forms and with the means for controlling the printing responsive to the serial number information for printing a serial number on the individual ones of the blank check forms.

6. The apparatus of claim 5 additionally including means for reading the serial number information on the individual ones of the blank check forms and for providing a reject of the check if the check is improperly printed with the serial number information.

7. The apparatus of claim 1 additionally including means for providing additional

information for printing on the individual ones of the blank check forms and with the means for controlling the printing responsive to the additional information for printing the additional information on the individual ones of the blank check forms.

8. The apparatus of claim 7 additionally including means for reading the additional information on the individual ones of the blank check forms and for providing a reject of the check if the check is improperly printed with the additional information.

9. The apparatus of claim 1 additionally including means coupled to the blank check forms for printing information on the individual ones of the blank check forms representative of an organization issuing the personalized checks.

10. The apparatus of claim 1 wherein the blank check forms are each preprinted with a particular denomination value for use as a travelers check and with the blank check forms each including a position for a countersignature for use in cashing the check after personalization.

11. The apparatus of claim 10 wherein each blank check form includes a preprinted denomination code representative of the particular denomination value of the particular blank check form and additionally including means for reading the denomination code and for providing a reject of the check if an improper denomination blank check form is transported for personalization.

12. The apparatus of claim 1 additionally including means for providing information representative of a printing verification pattern and with the means for controlling the printing responsive to the information representative of the printing verification pattern for printing the verification pattern on the individual ones of the blank check forms following the printing of the replica of the particular customer's signature.

13. An apparatus of claim 1 wherein the printing station includes an ink jet system for printing information on the blank check forms.

14. The apparatus of claim 13 wherein the ink jet system includes a plurality of separate ink jets located adjacent each other for directing individual drops of ink toward the blank check forms and with the means for controlling the printing providing control of the passage of the individual drops of ink to the blank check forms.

15. The apparatus of claim 1 wherein the means for storing information provides for storage of information representative of a plurality of customer accounts and with each customer's account providing for storage of information representative of a plurality of different signatures and with the means for controlling the printing providing printing of the different ones of the plurality of different signatures.

16. The apparatus of claim 1 wherein the means for storing the blank check forms additionally provides for storing blank cover sheet forms and wherein the means for transporting the blank check forms additionally provides for transporting the blank cover sheet forms to the

printing station and wherein the means for storing information additionally provides for storing particular customer information in addition to the information representative of the replica of the particular customer's signature and wherein the means for controlling the printing additionally provides for printing of the particular customer information on the blank cover sheet form.

17. The apparatus of claim 16 wherein the means for transporting provides for the transporting of one blank cover sheet form to serve as a cover sheet for a plurality of personalized checks.

18. The apparatus of claim 17 wherein the particular customer information includes the name and address of the particular customer and with the cover sheet forming a mailer for the plurality of personalized checks.

19. The apparatus of claim 17 wherein the particular customer information includes information representative of a particular customer order of checks and with the cover sheet providing a resumé of the particular customer order.

20. The apparatus of claim 1 wherein the personalization of the blank check forms is in accordance with particular customer orders and additionally including means for storing a plurality of customer orders.

21. The apparatus of claim 1 wherein a plurality of blank checks are personalized with a particular customer's signature and additionally including means for collating the plurality of personalized checks into a book of checks.

22. The apparatus of claim 21 additionally including means for stitching and binding the book of checks.

23. The apparatus of claim 1 wherein the means for storing information representative of a particular customer's signature stores the information on a digitized basis and with the means for controlling the printing providing the printing of the replica of the customer's signature on a digitized basis.

24. A travelers check personalization system including

an application form for receiving particular customer information including at least the signature of a particular customer,

means for scanning the signature of the particular customer on the application form and for producing data representative of a replica of the signature of the particular customer,

a customer file storage for storing the data representative of the replica of the signature of the particular customer and for storing data representative of other customer information for the particular customer,

blank travelers check forms having particular denomination values and with each blank form having a particular position for receiving a replica of a customer's signature,

a customer order storage for storing data representative of an order for travelers checks from the particular customer, and

printing means coupled to the blank forms and responsive to the data stored in the customer file storage and in the customer order storage for printing the replica of the particular customer's signature in the particular position on particular ones of the blank travelers check forms in accordance with the particular customer's order.

25. The travelers check personalization system of claim 24 including additional means for verifying the printing of the replica of the customer's signature and for providing a reject of the travelers check when the travelers check is improperly printed with the replica of the customer's signature.

26. The travelers check personalization system of claim 24 additionally including means coupled to the blank forms for printing a magnetic ink coded line of data on the particular ones of the blank forms.

27. The travelers check personalization system of claim 26 additionally including means for reading the magnetic ink coded line of data printed on the blank forms and for providing a reject of the travelers check when the travelers check is improperly printed with the magnetic ink coded line of data.

28. The travelers check personalization system of claim 24 additionally including means for providing serial number data for the particular ones of the blank forms and with the printing means responsive to the serial number data for printing a serial number on the particular ones of the blank forms.

29. The travelers check personalization system of claim 28 additionally including means for reading the serial number data on the particular ones of the blank forms and for providing a reject of the travelers check when the travelers check is improperly printed with the serial number data.

30. The travelers check personalization system of claim 24 additionally including means for providing additional data for printing on the particular ones of the blank forms and with the printing means responsive to the additional data for printing the additional data on the particular ones of the blank forms.

31. The travelers check personalization system of claim 30 additionally including means for reading the additional data on the particular ones of the blank forms and for providing a reject of the travelers check when the travelers check is improperly printed with the additional data.

32. The travelers check personalization system of claim 24 additionally including means coupled to the blank forms for printing data on the particular ones of the blank forms representative of an organization issuing the travelers checks.

33. The travelers check personalization system of claim 24 wherein the blank forms are each preprinted with a particular denomination value and with the blank forms each including a position for a countersignature for use in cashing the travelers check after personalization.

34. The travelers check personalization system of claim 33 wherein each blank form includes a



preprinted denomination code representative of the particular denomination value of the particular blank form and additionally including means for reading the denomination code and for providing a reject of an improper denomination blank form in accordance with the particular customer's order.

35. The travelers check personalization system of claim 24 additionally including means for providing data representative of a printing verification pattern and with the printing means responsive to the data representative of the printing verification pattern for printing the verification pattern on the particular ones of the blank forms following the printing of the replica of the particular customer's signature.

36. The travelers check personalization system of claim 24 wherein the printing means includes an ink jet system for printing data on the blank forms.

37. The travelers check personalization system of claim 36 wherein the ink jet system includes a plurality of separate ink jets located adjacent each other for directing individual drops of ink toward the blank forms and with the printing means controlling the passage of the individual drops of ink to the blank forms.

38. The travelers check personalization system of claim 24 wherein the customer file storage provides for storage of data representative of a plurality of customer accounts and with each customer's account providing for storage of data representative of a plurality of different signatures and with the printing means providing printing of the different ones of the plurality of different signatures.

39. The travelers check personalization system of claim 24 additionally including blank cover sheet forms and wherein the customer file storage additionally provides for storing particular customer data in addition to the data representative of the replica of the particular customer's signature and wherein the printing means additionally provides for the printing of the particular customer data on the blank cover sheet form.

40. The travelers check personalization system of claim 39 wherein one blank cover sheet form serves as a cover sheet for a plurality of personalized travelers checks.

41. The travelers check personalization system of claim 40 wherein the particular customer data includes the name and address of the particular customer and with the cover sheet forming a mailer for the plurality of personalized travelers checks.

42. The travelers check personalization system of claim 40 wherein the printing means provides for printing on the cover sheet of a resumé of the particular customer order.

43. The travelers check personalization system of claim 24 wherein a plurality of blank forms are personalized with a particular customer's signature and additionally including means for collating the plurality of personalized travelers checks into a book of travelers checks.

44. The travelers check personalization system of claim 43 additionally including means for stitching and binding the book of travelers checks.

45. The travelers check personalization system of claim 24 wherein the customer file storage stores the data representative of the replica of the particular customer's signature on a digitized basis and with the printing means providing the printing of the replica of the customer's signature on a digitized basis.

46. A method of personalizing blank check forms including the following steps, receiving particular customer information on an application form including at least the signature of a particular customer,

scanning the signature of the particular customer on the application form and producing data representative of a replica of the signature of the particular customer,

storing the data representative of the replica of the signature of the particular customer and storing data representative of other customer information for the particular customer,

providing blank check forms and with each blank form provided with a particular position for receiving a replica of a customer's signature, storing data representative of an order for personalized checks from the particular customer, and

printing the replica of the particular customer's signature in the particular position on particular ones of the blank check forms in accordance with the particular customer's order.

47. The method of claim 46 including the additional steps of verifying the printing of the replica of the customer's signature and providing a reject of the check if there is no verification that the check is properly printed with the replica of the customer's signature.

48. The method of claim 46 including the additional step of printing a magnetic ink coded line of information on the particular ones of the blank check forms.

49. The method of claim 48 including the additional steps of reading the magnetic ink coded line of information printed on the blank check forms and providing a reject of the check if the check is improperly printed with the magnetic ink coded line of information.

50. The method of claim 46 including the additional steps of providing serial number information for the particular ones of the blank check forms and printing a serial number on the particular ones of the blank check forms.

51. The method of claim 46 including the additional steps of reading the serial number information on the particular ones of the blank check forms and providing a reject on the check if the check is improperly printed with the serial number information.

52. The method of claim 46 including the additional steps of providing additional information for printing on the particular ones of the blank check forms and printing the additional information on the particular ones of the blank

check forms.

53. The method of claim 52 including the additional steps of reading the additional information on the particular ones of the blank check forms and providing a reject of the check if the check is improperly printed with the additional information.

54. The method of claim 46 including the additional step of printing information on the particular ones of the blank check forms representative of an organization issuing the personalized checks.

55. The method of claim 46 including the additional steps of preprinting each blank check form with a particular denomination value for use as a travelers check and providing such blank check form with a position for a countersignature for use in cashing the check after personalization.

56. The method of claim 55 including the additional steps of preprinting each blank check form with a preprinted denomination code representative of the particular denomination value of the particular blank check form and reading the denomination code and providing a reject of an improper denomination blank check form in accordance with the particular customer's order.

57. The method of claim 46 including the additional steps of providing information representative of a printing verification pattern and printing the verification pattern on the particular ones of the blank check forms following the printing of the replica of the particular customer's signature.

58. The method of claim 46 wherein the step of printing information on the blank check forms is provided by an ink jet system.

59. The method of claim 58 wherein the ink jet system is provided with a plurality of separate ink jets located adjacent each other for directing individual drops of ink toward the blank check forms and with the printing providing control of

the passage of the individual drops of ink to the blank check forms.

60. The method of claim 46 including the additional steps of storing information representative of a plurality of customer accounts and with each customer's account providing for storage of information representative of a plurality of different signatures and printing of the different ones of the plurality of different signatures.

61. The method of claim 46 including the additional steps of providing blank cover sheet forms and storing particular customer information in addition to the information representative of the replica of the particular customer's signature and printing of the particular customer information on the blank cover sheet form.

62. The method of claim 61 including the step of providing one blank cover sheet form to serve as a cover sheet for a plurality of personalized checks.

63. The method of claim 62 including the steps of providing the name and address of the particular customer and printing the name and address on the cover sheet to form a mailer for the plurality of personalized checks.

64. The method of claim 62 including the steps of providing customer information representative of a particular customer order or checks and printing the order information on the cover sheet to provide a resumé of the particular customer order.

65. The method of claim 46 including the step of collating a plurality of personalized checks into a book of checks.

66. The method of claim 65 including the additional step of stitching and binding the book of checks.

67. The method of claim 46 wherein the storing of information representative of a replica of the particular customer's signature is on a digitized basis and with the printing of the replica of the customer's signature on a digitized basis.